

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Canceled)
3. (Currently Amended) The queue scheduling mechanism according to ~~claim 2~~ claim 19, wherein a data packet is read by said queue scheduler from said queue device corresponding to said exhaustive priority rank only if an active GRANT signal from said reception device is received by said queue scheduler.
4. (Canceled)
5. (Currently Amended) The queue scheduling mechanism according to ~~claim 4~~ claim 19, wherein a data packet is read from the queue device determined by said priority rank N when there is no data packet available in the queue device corresponding to said exhaustive priority.
6. (Currently Amended) The queue scheduling mechanism according to ~~claim 4~~ claim 19, wherein a data packet is read from the queue device determined by said normal priority preemption algorithm when there is no data packet available in ~~neither~~ the queue device corresponding to said exhaustive priority rank ~~[[nor]]~~ and in the queue device corresponding to said priority rank N.
7. (Canceled)
8. (Canceled)
9. (Canceled)

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10. (New) A queue scheduling mechanism in a data packet transmission system, the data packet transmission system including a transmission device for transmitting data packets, a reception device for receiving said data packets, a set of queue devices respectively associated with a set of priorities each defined by a priority rank for storing each of data packet transmitted by said transmission device into the queue device corresponding to one of said priority ranks and a queue scheduler for reading, at each packet cycle, a data packet in one of said queue devices determined by a normal priority preemption algorithm, said queue scheduling mechanism comprising:

a credit device that provides at each packet cycle a value N defining the priority rank to be considered by said queue scheduler, the considered priority rank is selected based on a pre-determined value related to all of said priority ranks which are associated with said queue scheduling mechanism, whereby a data packet is read by said queue scheduler from the queue device corresponding to the priority rank N instead of said queue device determined by the normal priority preemption algorithm.

11. (New) The queue scheduling mechanism according to claim 10, wherein said credit device includes a credit table storing at each address a value N equal to one of said priority ranks, the address to be read by said queue scheduler for determining said priority rank N being incremented at each packet cycle after a data packet has been read from the queue device corresponding to said priority rank N.

12. (New) The queue scheduling mechanism according to claim 10, wherein a data packet is read by said queue scheduler from said queue device corresponding to said priority rank N only if an active GRANT signal from said reception device is received by said queue scheduler.

13. (New) The queue scheduling mechanism according to claim 12, wherein said GRANT signal depends upon a filling level of a receiving queue device in said reception device into which the data packets read from said queue devices are stored.

14. (New) The queue scheduling mechanism according to claim 10, wherein a data packet is read from the queue device determined by said normal priority preemption algorithm when there is no data packet available in the queue device corresponding to said priority rank N.

15. (New) The queue scheduling mechanism according to claim 11, wherein a number of locations in said credit table contain no value meaning that the priority rank to be considered is the highest priority rank.

16. (New) The queue scheduling mechanism according to claim 10, wherein said queue scheduling mechanism is used in a switch engine of a switching node within a network, wherein said transmission device is an input adapter and said reception device is an output adapter.

17. (New) The queue scheduling mechanism according to claim 10, wherein said pre-determined value comprises a pre-determined percentage of occurrence of said considered priority rank relative to all of said priority ranks.

18. (New) The queue scheduling mechanism according to claim 10 further comprising an output signal line that provides said data packet that is read by said queue scheduler to said reception device.

19. (New) The queue scheduling mechanism according to claim 10 further comprising an exhaustive priority register that registers the value of at least one exhaustive priority rank to be read by said queue scheduler from the queue device corresponding to said exhaustive priority rank rather than from the queue device corresponding to said priority rank N.